CLAIMS

1.   A video encoder comprising:

a vertical scaler, wherein said vertical scaler receives a first plurality of video lines

at a first frequency and outputs a second plurality of video lines at said first frequency;

5   a FIFO, wherein said FIFO receives said second plurality of video lines at said first

frequency from said vertical scaler, said FIFO outputting said second plurality of video

lines at a second frequency.

2.   The video encoder of claim 1 wherein said second plurality of video lines

10 are in a first video format.

3.   The video encoder of claim 2 further comprising a modulator/timing

generator, wherein said modulator/timing generator receives said second plurality of

video lines from said FIFO in said first video format, and said modulator/timing generator

15 converts said first video format into a second video format.

4.   The video encoder of claim 3 wherein said first video format is selected

from the group consisting of VGA and SVGA.

20   5.   The video encoder of claim 3 wherein said second video format is selected

from the group consisting of NTSC, PAL, SECAM, and SCART.

6. The video encoder of claim 3 wherein said first video format is SVGA and said second video format is NTSC.

5   7. The video encoder of claim 1 wherein said first frequency is an integer ratio of said second frequency.

8. The video encoder of claim 1 wherein said first frequency is a non-integer ratio of said second frequency.

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9. The video encoder of claim 1 wherein a first clock has said first frequency and a second clock has said second frequency, and wherein said first clock and said second clock are synchronous.

15   10. The video encoder of claim 1 wherein a first clock has said first frequency and a second clock has said second frequency, and wherein said first clock and said second clock are asynchronous.

11. A method comprising steps of:

20   receiving by a vertical scaler a first plurality of video lines at a first frequency;

scaling in said vertical scaler said first plurality of video lines at said first frequency into a second plurality of video lines at said first frequency;

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outputting by said vertical scaler said second plurality of video lines at said first

frequency;

receiving by a FIFO said second plurality of video lines at said first frequency;

outputting by said FIFO said second plurality of video lines at a second frequency.

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12.   The method of claim 11 further comprising steps of:

receiving by a modulator/timing generator said second plurality of video lines in a

first video format;

converting in said modulator/timing generator said second plurality of video lines

10   from said first video format into a second video format.

13.   The method of claim 12 wherein said first video format is selected from the

group consisting of VGA and SVGA.

15   14.   The method of claim 12 wherein said second video format is selected from

the group consisting of NTSC, PAL, SECAM, and SCART.

15.   The method of claim 12 wherein said first video format is SVGA and said

second video format is NTSC.

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16.   The method of claim 11 wherein said first frequency is an integer ratio of

said second frequency.

17.   The method of claim 11 wherein said first frequency is a non-integer ratio of said second frequency.

5   18.   The method of claim 11 wherein a first clock has said first frequency and a second clock has said second frequency, and wherein said first clock and said second clock are synchronous.

19.   The method of claim 11 wherein a first clock has said first frequency and a
10   second clock has said second frequency, and wherein said first clock and said second clock are asynchronous.

20.   A system comprising:

a multi-frequency clock generator, wherein said multi-frequency clock generator
15   outputs a first clock at a first frequency and a second clock at a second frequency;

a vertical scaler, wherein said vertical scaler receives said first clock at said first frequency from said multi-frequency clock generator, and wherein said vertical scaler receives a first plurality of video lines at said first frequency and outputs a second plurality of video lines at said first frequency;

20   a FIFO, wherein said FIFO receives said first clock at said first frequency and said second clock at said second frequency from said multi-frequency clock generator, and wherein said FIFO receives said second plurality of video lines at said first frequency

from said vertical scaler, and wherein said FIFO outputs said second plurality of video lines at said second frequency.

21. The system of claim 20 wherein said second plurality of video lines are in a
5   first video format.

22. The system of claim 21 further comprising a modulator/timing generator, wherein said modulator/timing generator receives said second clock at said second frequency from said multi-frequency clock generator, wherein said modulator/timing
10 generator receives said second plurality of video lines from said FIFO in said first video format, and said modulator/timing generator converts said first video format into a second video format.

23. The system of claim 22 wherein said first video format is selected from the
15 group consisting of VGA and SVGA.

24. The system of claim 22 wherein said second video format is selected from the group consisting of NTSC, PAL, SECAM, and SCART.

20 25. The system of claim 22 wherein said first video format is SVGA and said second video format is NTSC.

26.   The system of claim 20 wherein said first frequency is an integer ratio of said second frequency.

27.   The system of claim 20 wherein said first frequency is a non-integer ratio of

5   said second frequency.

28.   The system of claim 20 wherein said first clock and said second clock are synchronous.

10 29.   The system of claim 20 wherein said first clock and said second clock are asynchronous.

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